IN THE DRAWINGS:

In response to the Examiner's objections to the drawings, Applicant submits herewith Replacement Drawing Sheets, in order to attend to such objections. Approval of the Replacement Drawing Sheets is respectfully requested.

REMARKS

This application has been carefully reviewed in light of the final Office Action dated March 25, 2005. Claims 1 to 18 and 20 to 31 are pending in the application with Claim 1, the sole independent claim, having been amended. Reconsideration and further examination are respectfully requested.

Applicant wishes to thank the Examiner for the courtesies and thoughtful treatment accorded Applicant's representative during the March 24, 2005 telephonic interview. The undersigned also confirms receipt of the Examiner's Interview Summary (Form PTOL-413) forwarded with the Office Action.

During the interview, Applicant's representative informed the Examiner of some inconsistencies with the claim disposition indicated in the Office Action dated February 24, 2005. In particular, the February 24, 2005 Office Action indicates that Claim 31 is both rejected and allowable. In addition, the February 24, 2005 Office Action does not address Claim 12. In response, the Examiner agreed to issue this current Office Action to correct the foregoing inconsistencies as well as other errors. In addition, the Examiner agreed to reset the period for reply.

Applicant also thanks the Examiner for the indication that Claims 4, 8, 26 and 30 would be allowable if rewritten in independent form, including all of the limitations of the base claims. Applicant has chosen not to rewrite these claims at this time since the base claims for each of Claims 4, 8, 26 and 30 are believed to be allowable for at least the reasons set forth below.

In the Office Action, one objection to the drawings was maintained from the previous Office Action dated April 6, 2004. More specifically, the expression "function()"

in steps S609 and S623 of FIGS. 6A and 6B, respectively, was objected to for alleged ambiguity. The Replacement Drawing Sheets attached hereto are believed to attend to this objection. In particular, the replacement drawings replace the expression "function()" with "first_similarity()" in step S609, and with "second_similarity()" in step S623, as suggested by the Examiner. Reconsideration and withdrawal of this objection are therefore respectfully requested.

Turning to the art-based rejections, Claims 1 to 3, 5 to 7, 9, 10, 17, 18, 20 to 24 and 31 were rejected under 35 U.S.C. § 102(b) over "Extracting Multi-Dimensional Signal Features for Content-Based Visual Query" (Chang); Claims 11, 12, 14, 25 and 27 to 29 were rejected under 35 U.S.C. § 103(a) over Chang in view of "Quad-Tree Segmentation for Texture-Based Image Query" (Smith 1); Claim 13 was rejected under 35 U.S.C. § 103(a) over Chang in view of "Pictorial Query Specification and Processing" (Folkers); and Claims 15 and 16 were rejected under 35 U.S.C. § 103(a) over Chang in view of "Integrated Spatial and Feature Image Systems: Retrieval Analysis and Compression" (Smith 2).

The present invention generally concerns the indexing of a digital image comprising a plurality of blocks. A first information item is generated which is characteristic of the visual content of the image. A second information item is generated from the first information item, wherein the second information item is indicative of a degree of significance of the visual content of at least one of the plurality of blocks with respect to the overall content of the image and thereby characteristic of the spatial distribution of the visual content of the image in its image plane. An index is associated

with the image which is composed of the first information item and the second information item.

A feature of the present invention therefore lies in generating a second information item from a first information item which is characteristic of the visual content of an image, the second information item being indicative of a degree of significance of the visual content of at least one of a plurality of blocks with respect to the overall content of the image. By virtue of this feature, in which the second information item is generated from the first information item, information characteristic of the spatial distribution of the visual content of the image in its image plane can be more efficiently obtained.

A representative embodiment of the foregoing feature is described at page 17, lines 3 to 11 of the specification. In this cited portion, a data item w_i^{Im}, which is indicative of a degree of significance of the visual content of a block under consideration with respect to the overall content of an image Im, can be obtained using data item h_i^{Im}, which is characteristic of the visual content of the image.

The applied art is not seen to disclose or to suggest the features of the invention of the subject application. In particular, Chang, Smith 1, Folkers and Smith 2 are not seen to disclose or suggest at least the feature of generating a second information item from a first information item which is characteristic of the visual content of an image, the second information item being indicative of a degree of significance of the visual content of at least one of a plurality of blocks with respect to the overall content of the image.

As understood by Applicant, Chang discloses a visual information system (VIS) for indexing, accessing and manipulating images based on visual content, in which

low-level visual features of an image, such as texture, color and shape are automatically extracted. See Chang, Abstract. Regarding the extraction of colors, color histograms can be defined which are based on an image region. See Chang, page 7, paragraph 4. With reference to the extraction of texture, sets of texture features can be obtained to achieve texture separation among different texture classes. See Chang, page 3, paragraph 7.

The Office Action equated Chang's color features with the claimed first information item, and further equated Chang's texture features with the claimed second information item. Although Chang may be seen to disclose the use of color features and texture features, nothing in Chang is seen to disclose or suggest that the textures are generated from the color features. In fact, the color and texture features of Chang are seen to be generated independent of one another. Furthermore, paragraph 1 of page 9 in Chang discloses that signal features are independent of each other for searching purposes.

Accordingly, Chang is not seen to disclose or suggest generating a second information item from a first information item which is characteristic of the visual content of an image, the second information item being indicative of a degree of significance of the visual content of at least one of a plurality of blocks with respect to the overall content of the image.

In addition, Smith 1, Folkers and Smith 2 have been reviewed and are not seen to compensate for the deficiencies of Chang.

Accordingly, based on the foregoing amendments and remarks, independent Claim 1 as amended is believed to be allowable over the applied references.
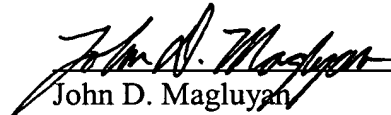
The other claims in the application are each dependent from the independent claims and are believed to be allowable over the applied references for at least the same

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reasons. Because each dependent claim is deemed to define an additional aspect of the invention, however, the individual consideration of each on its own merits is respectfully requested.

No other matters being raised, it is believed that the entire application is fully in condition for allowance, and such action is courteously solicited.

Applicant's undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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